

I Claim:

1. A method for handling a location-based service in a limited geographic area for a plurality of subscribers, wherein the limited geographic area is served by at least two devices for determining a geographic position of mobile radio users, the method which comprises:

receiving, in a central network element, an inquiry from the location-based service concerning an identity of the subscribers in the limited geographic area;

requesting, with the central network element, a current information item about the subscribers active in the limited geographic area from the at least two devices for determining the geographic position of mobile radio users; and

delivering, with the central network element, the information to the location-based service.

2. The method according to claim 1, wherein a first device for determining the geographic position of mobile radio users is located within an infrastructure of a first mobile radio network and a second device for determining the geographic position of mobile radio users is located within an infrastructure of a second mobile radio network.

3. The method according to claim 1, which comprises, upon receiving an inquiry in the central network element, checking whether a desired result is already stored as a result of a previous inquiry and the result can be delivered to the location-based service, or the central network element must request the desired result from the at least one device for determining the geographic position of mobile radio users.

4. The method according to claim 3, which comprises providing a result requested by the central network element from a device for determining the geographic position of mobile radio users with an additional identification, and reusing the stored result for one or more further inquiries in dependence on the additional identification.

5. The method according to claim 1, which comprises, upon receiving an inquiry in the central network element, first checking whether a desired inquiry has already been processed or a result of a previous inquiry is still outstanding, and, after receiving the result of the previous inquiry, a current inquiry can also be answered.

6. The method according to claim 5, which comprises providing a result requested by the central network element from a device for determining the geographic position of mobile radio users with an additional identification, and reusing the

stored result for one or more further inquiries in dependence on the additional identification.

7. The method according to claim 6, wherein the additional identification is at least one element selected from the group consisting of a timestamp and information on an accuracy of the inquiry.

8. The method according to claim 1, which comprises causing the central network element to collect the results of the inquiries from the at least two devices for determining the geographic position of mobile radio users and, as soon as all interrogated devices for determining the geographic position of mobile radio users have answered, to combine the answers and to deliver the result to the location-based service.

9. The method according to claim 1, wherein the inquiry is defined to cover:

a first geographic region for which a first central network element is responsible;

a second geographic region for which a second central network element is responsible; and

the first central network element receives an inquiry and forwards the inquiry for the second geographic region to the second central network element.

10. The method according to claim 1, which comprises storing results of inquiries as a list in the central network element and delivering only an identification of the list back to the location-based service.

11. The method according to claim 10, which comprises receiving or determining with the central network element characteristics of the subscribers determined from the devices for determining the geographic position of mobile radio users, collecting and storing the characteristics for later use, and delivering the characteristics back to the location-based service together with the identification of the list.

12. The method according to claim 1, wherein the central network element contains a correlation between the identity of at least one subscriber for whom a location information is requested and the network node responsible for the subscriber and, when the central network element receives an inquiry message from the location-based service, the central network element distributes the inquiry to each identity stored for the network node.

13. A method of providing location-based services within a limited geographic area to a plurality of subscribers, which comprises:

transmitting an inquiry from a location-based service to a central network element concerning an identity of the subscribers in the limited geographic area;

requesting information concerning the identity of the subscribers in the limited geographic area from at least two devices serving the limited geographic area for determining a geographic position of mobile radio users;

receiving a current information item in the central network element from the at least two devices for determining the geographic position of mobile radio users, about the subscribers active in the limited geographic area; and

forwarding the information from the central network element to the location-based service, and providing the location-based services to the subscribers in the limited geographic area.

14. A device for handling inquiries of a location-based service for a limited geographic area served by at least two devices for determining a geographic position of mobile radio users, for a plurality of subscribers in the limited geographic area, comprising:

means for receiving inquiries, sent by the location-based service, about an identity of subscribers in the limited geographic area;

means for sending a request for current information about the subscribers active in the limited geographic area to a device for determining the geographic position of mobile radio users;

means for receiving responses from the interrogated device for determining the geographic position of mobile radio users;

means for processing the responses to form an inquiry result;
and

means for sending the inquiry result to the location-based service.

15. The device according to claim 14, which further comprises:

means for storing the responses from the interrogated device for determining the geographic position of mobile radio users and an additional identification of the responses; and

means for comparing a new inquiry with the responses already stored.

16. The device according to claim 14, which further comprises:

means for storing the responses from the interrogated device for determining the geographic position of mobile radio users and sending an unambiguous identification of the responses; and

means for using the unambiguous identification of the answers in subsequent messages from the location-based service.